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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,798	10/26/2005	Djemel Ziou	37114-213808	6160

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VENABLE LLP
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WASHINGTON, DC 20043-9998

EXAMINER

NEWTON, CALEB R

ART UNIT	PAPER NUMBER
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2109

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/523,798

Applicant(s)

ZIOU ET AL.

Examiner

Caleb R. Newton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Corrected and fully translated (ex. fig 3 with its use of "Suivant") drawing sheets (particularly fig 3, 9 and 10) in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. Claims 22 and 23 recite the limitation "said graphical user interface" in the claim language. There is insufficient antecedent basis for this limitation in the claim.
4. Examiner is unsure whether or not applicant meant for claim 22 to depend from 21, which uses the language "graphical user interface."

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. The claimed invention in **claims 20-25** is directed to software, *per se*, a non-statutory subject matter. The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive

material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Computer programs are often recited as part of a claim. Examiners must determine whether the computer program is being claimed as part of an otherwise statutory manufacture or machine. In such a case, the claim remains statutory irrespective of the fact that a computer program is included in the claim. The same result occurs when a computer program is used in a computerized process where the computer executes the instructions set forth in the computer program. Only when the claimed invention taken as a whole is directed to a mere program listing, i.e., to only its description or expression, is it descriptive material per se and hence nonstatutory.

When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

Finally, the **claims 1-19** are rejected as falling under the judicial exception of an abstract idea which lacks a useful, concrete, and tangible result. A claimed series of

steps or acts that do not result in a useful, concrete, and tangible result are not statutory within the meaning of 35 USC 101. In the instant case, the claims recite, “[retrieving]_,” “[restricting]_,” “[discriminating]_,” and “[computing]_.” However, no useful, concrete, and tangible result is claimed. For example, “writing said data,” “updating said data,” “sending said data” being claimed at the end of the claim may comprise a useful, concrete, and tangible result. Absent such a result, however, the claims are not statutory. Applicant is also reminded that even if said claims are brought within the purview of 101 as indicated in this paragraph, they still must meet the threshold requirement of functionality and therefore applicant cannot simply claim the mere arrangement of data.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 1, 2, 4, 10, 17-21 and 24-26** rejected under 35 U.S.C. 102(e) as being anticipated by Hsieh et al. Hsieh et al teaches, including the method, apparatus and system of, a content based technique for retrieving image database files comprised of: sets/“bags” of positive and negative data files with at least one relevant feature (fig 5 and 6; column 2, lines 32-63) (the database being inherently with the interface to

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receive said positive and negative data files) (**claims 1, 2, 18, 19, 20 and 26**), restriction and retrieval components calculating at least one at least one discriminating feature (wherein there are both positive and negative image sets which can include anything but λ (empty set)) differentiating between the positive and negative examples (and therefore allowing differentiation) (column 2, lines 32-63; column 3, lines 5-34) (**claims 1, 2, 4, 10, 18, 19, 20 and 26**) and restriction and retrieval components computing a relevance/goodness score based on the similarity to the positive data files and dissimilarity to negative data and thereby computing a ranked list (which may be done on the basis of one or more discriminating features, meeting applicant's lexiconical outline of the meaning of a "discrimination" score) which thereby one may select such file with the highest score (column 7, lines 21-53; column 10, lines 1-68) (**claims 1, 2, 18, 19, 20 and 26**). A device, according to the *The American Heritage® Dictionary of the English Language, Fourth Edition*, is simply a "technique or means", and thus, by way of object oriented programming, most programs (when compiled) are intergrated into one logic (as computers are entirely composed of logic) driven means and therefore the same logic device (**claim 25**).

For **claim 17**, Hsieh et al teaches, including the method, apparatus and system of, using a series of sample/training images to collect the positive and negative images (column 1, lines 10-17).

For **claim 21**, Hsieh et al shows, including the method, apparatus and system of, a graphical user interface which displays example images (positive and negative) (fig. 9 and 10).

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 3, 5-9 and 11-16** rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh et al in view of *MindReader: Querying databases through multiple examples*.

As set forth above in the rejection of claims 2 and 4, Hsieh et al teaches all the elements and, in addition, Hsieh et al teaches, including the method, apparatus and system of, the concept of weighted the contents of said negative and positive “bags”/sets (column 8, line 64 – column 9, line 46). Nonetheless, Hsieh et al does not teach the images being arrived at, in search for optimal vector q (which may be in respect to a particular feature), by way of a weighted (where the weight may be the comparative degree of relevance/discrimination score which may be computed by the ellipsoid distance from optimal vector q) average of the data vectors (i.e. the images), which is, though, disclosed by *MindReader* (page 221). As one of ordinary skill in the skill in art at the time of invention would know, it is inherent in weighting that the various weights add up to 1 where said weighting is percentile based (e.g. 50% (or .5) + 50% (or .5) = 100% (or 1)) and said artisan would likewise know that said vectors of ellipsoid distance with their comparative weight may be arranged in a matrix so as to aid computation, as done in *MindReader* (page 221-222) (**claims 8, 9 and 13**). Therefore, it

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would have been obvious to one of ordinary skill in the art at the time of invention to provide the image search engine of Hsieh with the weighted average computation of *MindReader* where it was deemed that this might aid the human feedback into the synthesis of said data to into a better search result.

Claims 22 and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh et al in view of *MindReader: Querying databases through multiple examples*. As set forth above in the rejection of claim 20, Hsieh et al teaches all the elements and, in addition, including the method, apparatus and system of, a user interface operable for viewing retrieved images (fig 9 and 10). Further, this examiner takes notice of the fact that where there is a parameter, such as relevance, and a program creator wishes for the user to be able modify that said parameter with respect to a given set of data (e.g. an image), it would have been obvious to one of ordinary skill in the art at the time of invention to make an interface operative to allow said user the ability to specify said parameter. Therefore, it would have obvious to one of ordinary skill in the art at the time of invention to combine the image search engine of Hsieh with an interface operable to specify a parameter in the search engine of Hsieh where there was a to provide data manipulation capability by the user.

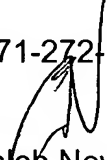
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caleb R. Newton whose telephone number is 1-571-

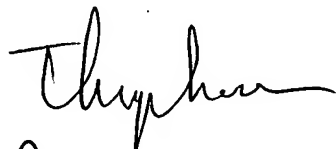
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270-1758. The examiner can normally be reached on M-F, 7:30-5:00, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Pham can be reached on (571) 272-3689. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Caleb Newton
Patent Examiner


Primary Examiner
Thomas Pham